

SITE NAME:

### SHERIDAN

PROPOSED 165' MONOPOLE WITH 5' LIGHTNING ARRESTOR PROPOSED TELECOMMUNICATIONS SITE

203RD ST E 203RD ST E

SCALE: NONE

MEADOWS CT

VICINITY MAP



Know what's below. Call before you dig.



#### 1619 W. DEFENBAUGH STREET KOKOMO, IN 46902 **TELEPHONE COMPANY**

PHONE: (800) 288-2020

#### **BUILDING CODES AND STANDARDS**

SHEET INDEX

OVERALL SITE LAYOUT (OVERLAY) OVERALL SITE LAYOUT ENLARGED SITE LAYOUT TOWER ELEVATION SHELTER ELEVATIONS SHELTER ELEVATIONS SHELTER ELEVATIONS FOUNDATION DETAILS & NOTES FENCE DETAILS & NOTES

EQUIPMENT GROUNDING PLAN ELECTRICAL & GROUNDING DETAILS **ELECTRICAL & GROUNDING NOTES** 

TITLE SHEET

SITE SURVEY

CIVIL DETAILS

GROUNDING PLAN

LANDSCAPE PLAN

CONTACT INFORMATION

T-1

SURVEY:

B-1 TO B-1.1

ELECTRICAL:

LANDSCAPE:

FIRE DEPARTMENT

506 S MAIN ST SHERIDAN, IN 46069 PHONE: (317) 758-4561

SHERIDAN FIRE DEPARTMENT

POLICE DEPARTMENT HAMILTON COUNTY SHERIFF 18100 CUMBERLAND ROAD NOBLESVILLE, IN 46060 PHONE: (317) 773-1872

**ELECTRIC COMPANY** DUKE ENERGY

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST

AMERICAN CONCRETE INSTITUTE 318

AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222

STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND SUPPORTING STRUCTURES TIA-601

COMMERCIAL BUILDING GROUNDING AND BONDING

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS

IEEE-81, IEEE 1100, IEEE C62.41 ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS -TELECOM, ENVIRONMENTAL PROTECTION

REQUIREMENTS FOR TELECOMMUNICATIONS

2006 IBC (WITH AMENDMENTS)

2011 NEC (WITH AMENDMENTS)

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS, THE MOST RESTRICTIVE REQUIREMENT

POWER OF DESIGN

4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

#### CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	7.10.14	PRELIM ISSUE
В	8.28.14	LANDSCAPING
С	9.30.14	CLIENT COMMENTS
	-	

SITE INFORMATION:

#### SHERIDAN

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

#### SITE NUMBER: HV880

14-2776 PTB 7.10.14

TITLE SHEET AND **PROJECT** INFORMATION

SHEET NUMBER:



DRIVING DIRECTIONS FROM HORVATH COMMUNICATIONS [312 W COLFAX AVE., SOUTH

DEPART US-20 / W COLFAX AVE TOWARD W WASHINGTON ST 0.1 MI; TURN RIGHT ONTO JS-31 S BRANCH / IN-933 S / N MAIN ST 2.9 MI; TURN LEFT ONTO US-31 BRANCH / W CHIPPEWA AVE 0.1 MI; TURN RIGHT TO STAY ON US-31 BRANCH / S MICHIGAN ST DAIRY QUEEN ON THE CORNER 0.7 MI; KEEP STRAIGHT ONTO US-31 / US-31 BRANCH 0.2 MI; KEEP STRAIGHT ONTO US-31 PASS PHILLIPS 66 IN 1.0 MI, 7.5 MI; KEEP STRAIGHT ONTO US-31 3.9 MI: KEEP STRAIGHT ONTO US-31 / DIXIE HWY 1.2 MI; BEAR RIGHT ONTO US-31 S MCDONALD'S ON THE CORNER 66.0 MI; KEEP STRAIGHT ONTO US-31 S / US-35 S / N COUNTY ROAD OO EW; PASS SWIFTY ON THE LEFT IN 2.5 MI 4.7 MI; KEEP STRAIGHT ONTO US-31 S / S REED RD PASS GAS AMERICA ON THE LEFT IN 4.3 MI, 27.5 MI; TURN RIGHT ONTO E 203RD ST D.5 MI; ROAD NAME CHANGES TO E 206TH ST 1.1 MI; TURN LEFT ONTO STREET 1 359 FT; TURN RIGHT ONTO E WORMAN ST 338 FT; ARRIVE AT SITE ON THE LEFT, 20481 HORTON ROAD

DEPARTMENT	NAME / SIGNATURE	DATE
LAND/TOWER OWNER		
SITE ACQUISITION AGENT		
ZONING/PERMITTING AGENT		
A&E MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		

#### PROJECT INFORMATION

HAMILTON COUNTY

SITE ADDRESS:

20481 HORTON ROAD SHFRIDAN, IN 46069

TOWER OWNER /APPLICANT:

HORVATH COMMUNICATIONS

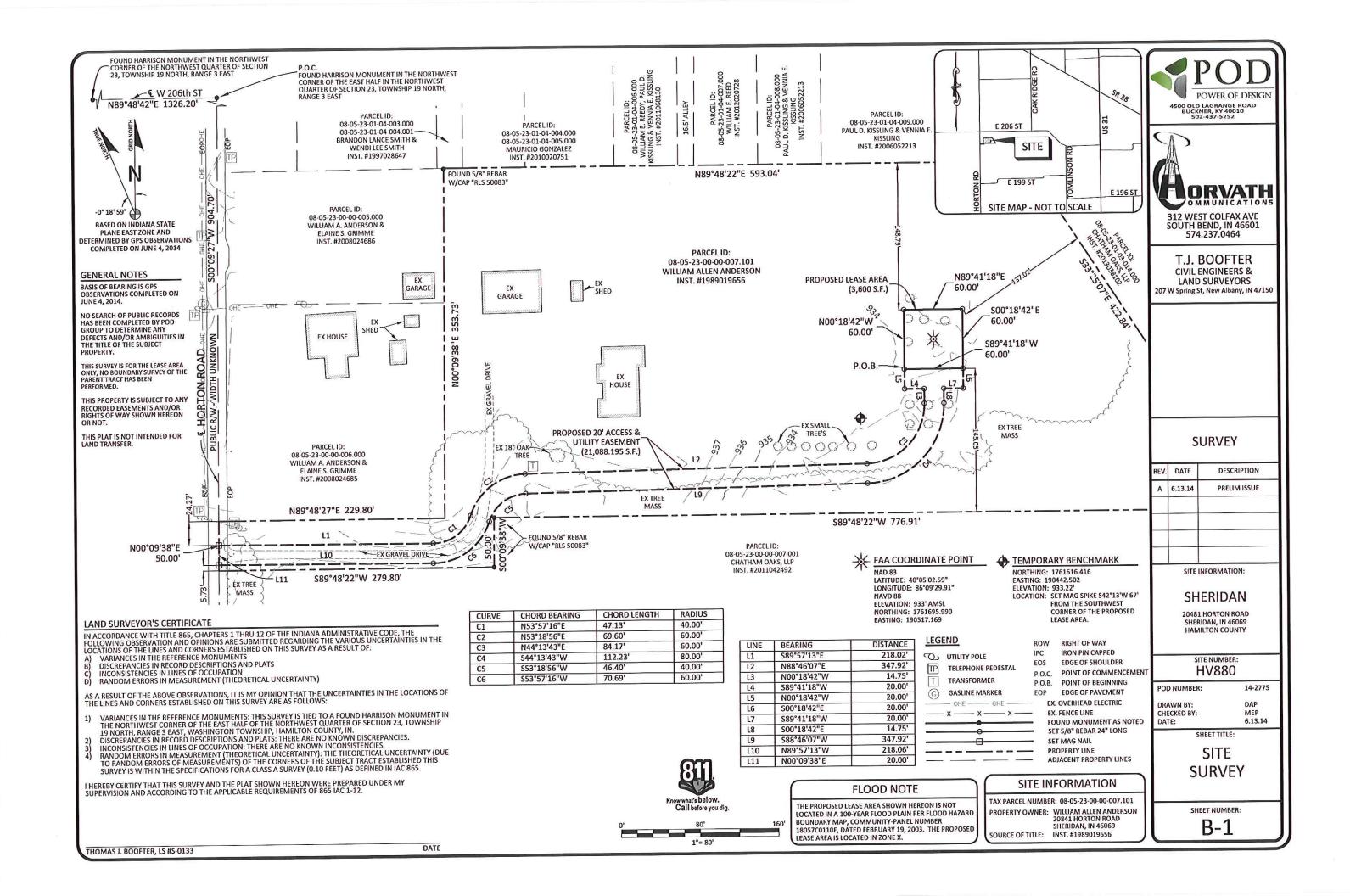
312 WEST COLFAX AVE. SOUTH BEND, IN 46601

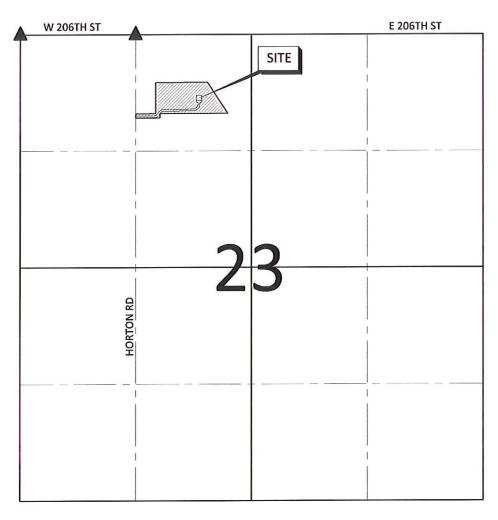
40° 05' 02.59" LATITUDE: 86° 09' 29.91" LONGITUDE **ELEVATTION:** 933' AMSL

#### SCOPE OF WORK:

CONSTRUCTION DRAWINGS FOR:

SITE WORK, UNMANNED EQUIPMENT SHELTER ON A CONCRETE FOUNDATION AND UTILITY INSTALLATIONS.





SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST WASHINGTON TOWNSHIP, HAMILTON COUNTY, INDIANA

▲ DENOTES FOUND MONUMENT AS NOTED ON B-1

#### LAND SURVEYOR'S CERTIFICATE

IN ACCORDANCE WITH TITLE 865, CHAPTERS 1 THRU 12 OF THE INDIANA ADMINISTRATIVE CODE, THE FOLLOWING OBSERVATION AND OPINIONS ARE SUBMITTED REGARDING THE VARIOUS UNCERTAINTIES IN THE LOCATIONS OF THE LINES AND CORNERS ESTABLISHED ON THIS SURVEY AS A RESULT OF:

- VARIANCES IN THE REFERENCE MONUMENTS DISCREPANCIES IN RECORD DESCRIPTIONS AND PLATS
- INCONSISTENCIES IN LINES OF OCCUPATION
- RANDOM ERRORS IN MEASUREMENT (THEORETICAL UNCERTAINTY)

AS A RESULT OF THE ABOVE OBSERVATIONS, IT IS MY OPINION THAT THE UNCERTAINTIES IN THE LOCATIONS OF THE LINES AND CORNERS ESTABLISHED ON THIS SURVEY ARE AS

- VARIANCES IN THE REFERENCE MONUMENTS: THIS SURVEY IS TIED TO A FOUND HARRISON MONUMENT IN THE NORTHWEST CORNER OF THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST, WASHINGTON TOWNSHIP, HAMILTON COUNTY, IN.
  DISCREPANCIES IN RECORD DESCRIPTIONS AND PLATS: THERE ARE NO KNOWN
- INCONSISTENCIES IN LINES OF OCCUPATION: THERE ARE NO KNOWN INCONSISTENCIES RANDOM ERRORS IN MEASUREMENT (THEORETICAL UNCERTAINTY): THE THEORETICAL UNCERTAINTY (DUE TO RANDOM ERRORS OF MEASUREMENTS) OF THE CORNERS OF THE SUBJECT TRACT ESTABLISHED THIS SURVEY IS WITHIN THE SPECIFICATIONS FOR A CLASS A SURVEY (O.10 FEET) AS DEFINED IN IAC 865.

I HEREBY CERTIFY THAT THIS SURVEY AND THE PLAT SHOWN HEREON WERE PREPARED UNDER MY SUPERVISION AND ACCORDING TO THE APPLICABLE REQUIREMENTS OF 865 IAC 1-12.

#### LEGAL DESCRIPTIONS

THE FOLLOWING IS A DESCRIPTION OF AN AREA TO BE LEASED FROM THE PROPERTY OF WILLIAM ALLEN ANDERSON, WHICH IS MORE PARTICULARLY DESCRIBED AS

#### PROPOSED LEASE AREA

BEING PART OF THE NORTHWEST QUARTER OF SECTION OF 23, TOWNSHIP 19 NORTH, RANGE 3 EAST, WASHINGTON TOWNSHIP IN HAMILTON COUNTY, INDIANA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

COMMENCING AT A FOUND HARRISON MONUMENT IN THE NORTHWEST CORNER OF THE EAST HALF IN THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST, ALSO BEING IN THE INTERSECTION OF W 206th ST AND HORTON ROAD, SAID POINT IS N89°48'42"E 1326.20' FROM A FOUND HARRISON MONUMENT IN THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST AND IN THE CENTER OF W 206th ST; THENCE WITH THE QUARTER QUARTER LINE OF SECTION 23 AND CENTERLINE OF HORTON ROAD SOO°09'27"W 904.70' TO A POINT IN PROPERTY CONVEYED TO WILLIAM ALLEN ANDERSON AS RECORDED IN INST. #1989019656 AND COMMON CORNER TO WILLIAM A. ANDERSON & ELAINE S. GRIMME AS RECORDED IN INST. #2008024685; THENCE CONTINUING WITH SAID CENTERLINE OF HORTON RD AND ANDERSON'S LINE INST. #1989019656, S00°09'27"W 24.27' TO A SET MAG NAIL; THENCE TRAVERSING THE LANDS OF ANDERSON, INST. #1989019656, S89°57'13E 218.02' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A RADIUS OF 40.00', N53°57'16"E 47.13' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 60.00', N53°18'56"E 69.60' TO A SET 5/8" REBAR; THENCE N88°46'07"E 347.92' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A NOD LO DO E 09.00 TO A DEL 3/9 REDAR; THENCE NOS 40 OF E 347.32 TO A DEL 3/8 REDAR; THENCE WITH THE CHORD OF A CORVE TO THE LEFT HAVING A RADIUS OF 60.00', N44°13'43"E 84.17' TO A SET 5/8" REBAR; THENCE N00°18'42"W 14.75' TO A SET 5/8" REBAR; THENCE S89°41'18"W 20.00' TO A SET 5/8" REBAR; THENCE N00°18'42"W 20.00' TO A SET 5/8" REBAR AND THE TRUE POINT OF BEGINNING OF THE PROPOSED LEASE AREA; THENCE N00'18'42"W 60.00' TO A SET 5/8" REBAR; THENCE N89°41'18"E 60.00' TO A SET 5/8" REBAR; THENCE N89°41'18"E 60.00' TO A SET 5/8" REBAR; THENCE S89°41'18"W 60.00' TO THE POINT OF BEGINNING CONTAINING 3,600 SQUARE FEET AS PER SURVEY BY THOMAS J. BOOFTER, LS #S-0133 WITH T.J. BOOFTER, CIVIL ENGINEER AND LAND SURVEYOR, DATED HIME 4. 2014

#### PROPOSED 20' ACCESS AND UTILITY EASEMENT

BEING PART OF THE NORTHWEST QUARTER OF SECTION OF 23, TOWNSHIP 19 NORTH, RANGE 3 EAST, WASHINGTON TOWNSHIP IN HAMILTON COUNTY, INDIANA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

COMMENCING AT A FOUND HARRISON MONUMENT IN THE NORTHWEST CORNER OF THE EAST HALF IN THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST, ALSO BEING IN THE INTERSECTION OF W 206th ST AND HORTON ROAD, SAID POINT IS N89°48'42"E 1326.20' FROM A FOUND HARRISON MONUMENT IN THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST AND IN THE CENTER OF W 206th ST; THENCE WITH THE QUARTER QUARTER LINE OF SECTION 23 AND CENTERLINE OF HORTON ROAD S00°09'27"W 904.70' TO A POINT IN PROPERTY CONVEYED TO WILLIAM ALLEN ANDERSON AS RECORDED IN INST. #1989019656 AND COMMON CORNER TO WILLIAM A. ANDERSON & ELAINE S. GRIMME AS RECORDED IN INST. #2008024685; THENCE CONTINUING WITH SAID CENTERLINE OF HORTON RD AND ANDERSON'S LINE INST. #1989019656, S00'09'27"W 24.27' TO A SET MAG NAIL AND THE TRUE POINT OF BEGINNING OF THE PROPOSED 20' ACCESS & UTILITY EASEMENT; THENCE TRAVERSING THE LANDS OF ANDERSON, INST. #1989019656, S89'57'13E 218.02' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A RADIUS OF 40.00', N53°57'16"E 47.13' TO A SET 5/8" S89 37 136 218.02 TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 60.00', N53°18'56"E 69.60' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A RADIUS OF 60.00', N44°13'43"E 84.17' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A RADIUS OF 60.00', N44°13'43"E 84.17' TO A SET 5/8" REBAR; THENCE N00°18'42"W 14.75' TO A SET 5/8" REBAR; THENCE S89°41'18"W 20.00' TO A SET 5/8" REBAR; THENCE N00°18'42"W 20.00' TO A SET 5/8" REBAR; THENCE LEAVING SAID LEASE LINE S00°18'42"E 20.00' TO A SET 5/8" REBAR; THENCE S89°41'18"W 20.00' TO A SET 5/8" REBAR; T CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 80.00', S44°13'43"W 112.23' TO A SET 5/8" REBAR; THENCE S88°46'07"W 347.92' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE LEFT HAVING A RADIUS OF 40.00', S53°18'56"W 46.40' TO A SET 5/8" REBAR; THENCE WITH THE CHORD OF A CURVE TO THE RIGHT HAVING A RADIUS OF 60.00', SS3\*57'16"W 70.69' TO A SET 5/8" REBAR; THENCE N89\*57'13"W 218.06' TO A SET MAG NAIL IN THE CENTER OF HORTON RD; THENCE WITH SAID ROAD N00'09'38"E 20.00' TO THE POINT OF BEGINNING CONTAINING 21,088.195 SQUARE FEET AS PER SURVEY BY THOMAS J. BOOFTER, LS #S-0133 WITH T.J. BOOFTER, CIVIL ENGINEER AND LAND SURVEYOR, DATED JUNE 4, 2014.

#### LEGAL DESCRIPTION PER DEED OF RECORD (NOT FIELD SURVEYED)

A PART OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST LOCATED IN WASHINGTON TOWNSHIP, HAMILTON COUNTY,

COMMENCING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 19 NORTH, RANGE 3 EAST (STONE FOUND);THENCE N89°44'20"E (ASSUMED BEARING) 1,326.41' ON AND ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER TO THE NORTHWEST CORNER OF THE EAST HALF OF SAID NORTHWEST QUARTER, SAID CORNER BEING COLINEAR WITH AND EQUIDISTANT FROM THE NORTHWEST CORNER AND THE NORTHEAST CORNER (STONE FOUND) OF SAID NORTHWEST QUARTER; THENCE S00°05'36"W 905.10' ON AND ALONG THE WEST LINE OF THE EAST HALF OF SAID NORTHWEST QUARTER TO THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE N89°44'20"E 229.8' PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST QUARTER; THENCE N00°05'36"E 353.73' PARALLEL WITH THE WEST LINE OF THE EAST HALF OF SAID NORTHWEST QUARTER; THENCE N89°44'20"E 593.04' PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST QUARTER TO THE WESTERLY RIGHT-OF-WAY LINE OF THE MONON RAILROAD (32.5', HALF RIGHT-OF-WAY); THENCE \$33\*29'09"E 422.84' ALONG THE WESTERLY RIGHT-OF-WAY LINE OF SAID MONON RAILROAD; THENCE \$89\*44'20"W 776.91' PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST QUARTER: THENCE S00°05'36"W 50.00' PARALLEL WITH THE WEST LINE OF THE EAST HALF OF SAID NORTHWEST QUARTER; THENCE 589\*44'20"W 279.80' PARALLEL WITH THE NORTH LINE OF SAID NORTHWEST QUARTER TO THE WEST LINE OF THE EAST HALF OF SAID NORTHWEST QUARTER; THENCE NO0\*05'36"E 50.00' ALONG THE WEST LINE OF THE EAST HALF OF SAID NORTHWEST QUARTER TO THE POINT OF BEGINNING.

# POWER OF DESIGN

4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

T.J. BOOFTER **CIVIL ENGINEERS &** LAND SURVEYORS 207 W Spring St, New Albany, IN 47150

#### **SURVEY**

REV.	DATE	DESCRIPTION
A	6.13.14	PRELIM ISSUE

SITE INFORMATION:

#### SHERIDAN

20481 HORTON ROAD SHERIDAN, IN 46069 HAMILTON COUNTY

SITE NUMBER: HV880

POD NUMBER

DRAWN BY: CHECKED BY: DATE:

DAP 6.13.14

14-2775

SHEET TITLE

SITE **SURVEY** 

SHEET NUMBER:

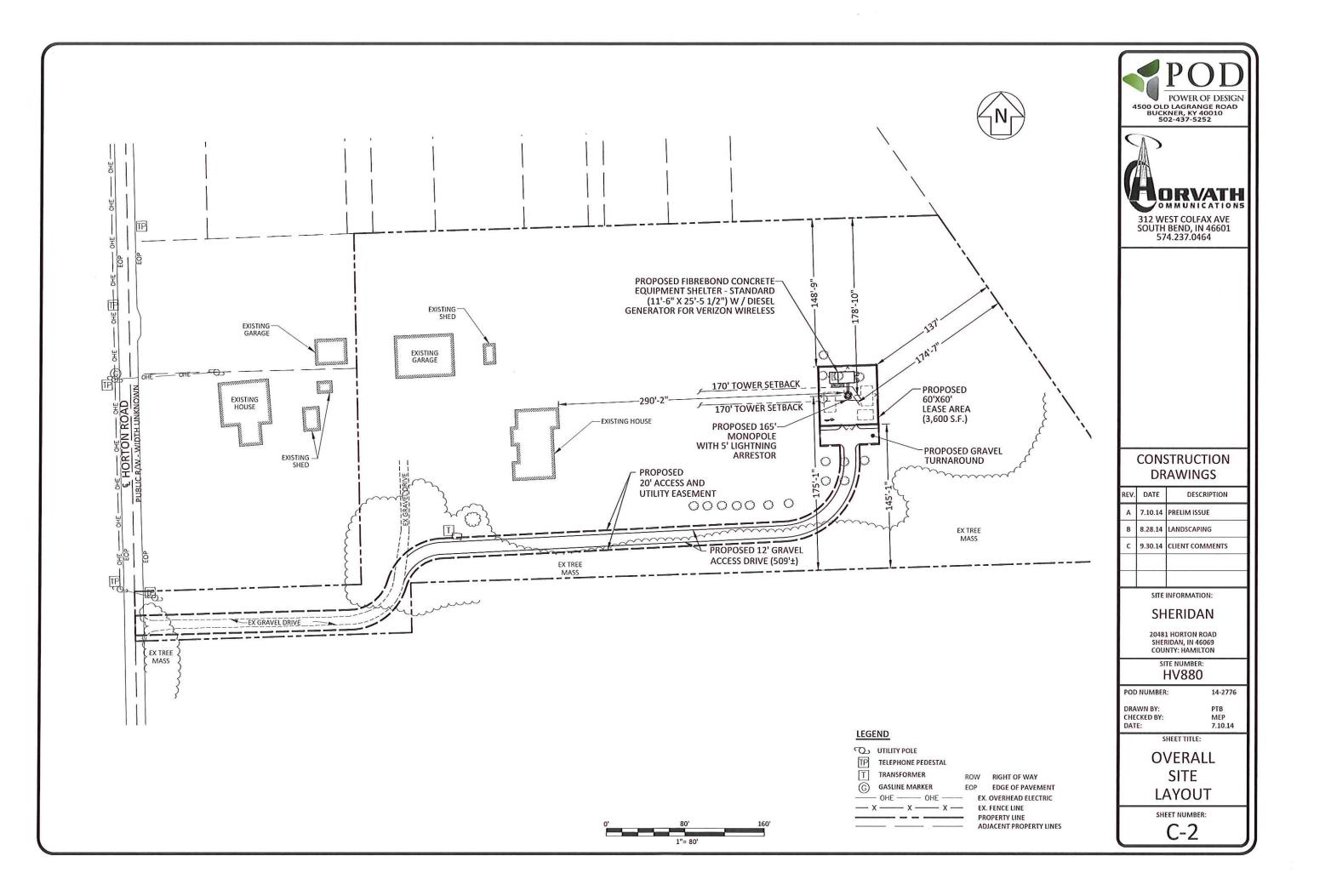
SITE INFORMATION

TAX PARCEL NUMBER: 08-05-23-00-00-007.101 PROPERTY OWNER: WILLIAM ALLEN ANDERSON

20841 HORTON ROAD

SOURCE OF TITLE: INST. #1989019656

HOMAS J. BOOFTER, LS #S-0133











312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

#### CONSTRUCTION **DRAWINGS**

REV.	DATE	DESCRIPTION
Α	7.10.14	PRELIM ISSUE
В	8.28.14	LANDSCAPING
С	9.30.14	CLIENT COMMENTS

SITE INFORMATION:

#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

SITE NUMBER:

POD NUMBER:

UTILITY POLE

T TRANSFORMER

GASLINE MARKER

TP TELEPHONE PEDESTAL

ROW RIGHT OF WAY

PROPERTY LINE ADJACENT PROPERTY LINES

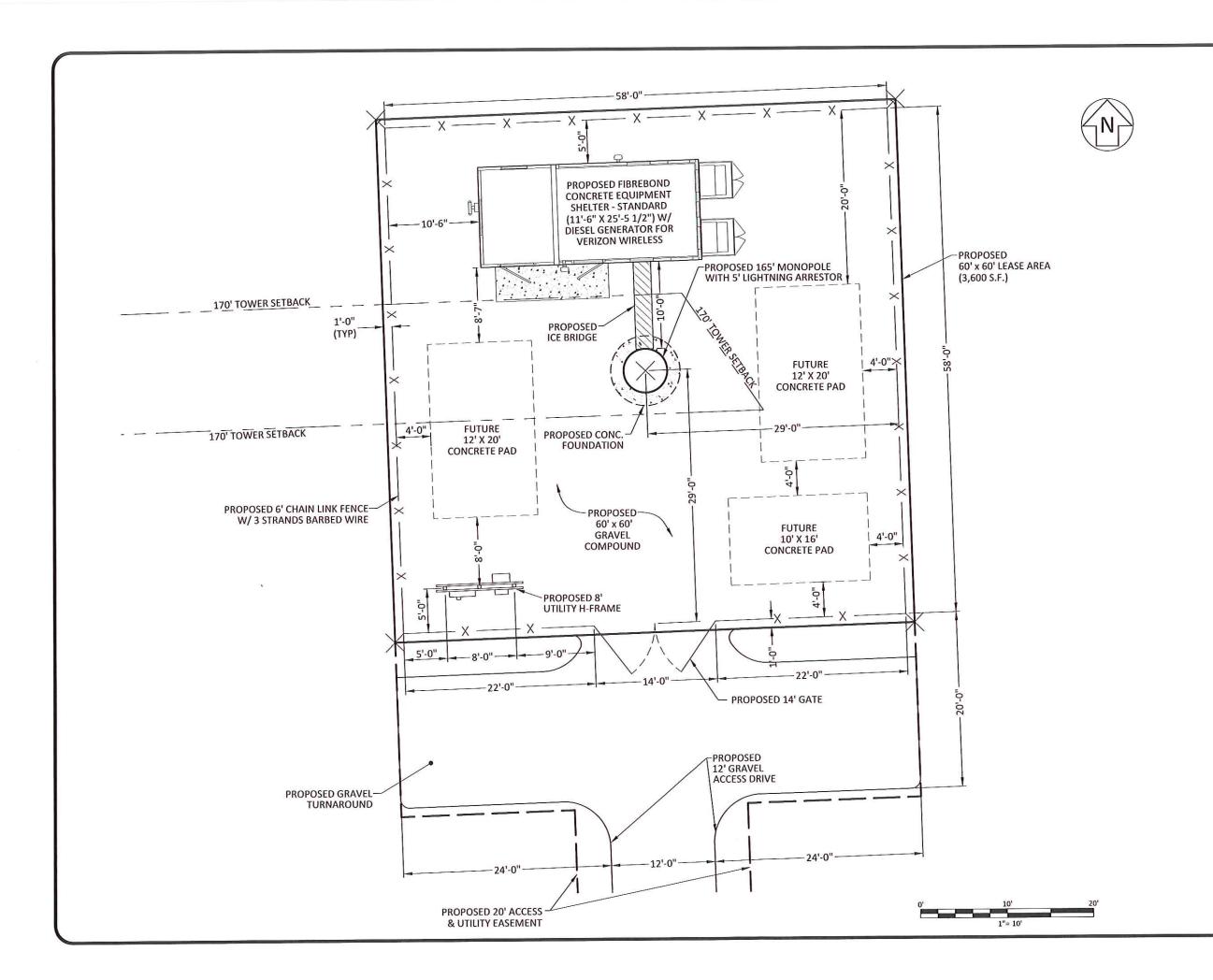
— OHE — OHE — EX. OVERHEAD ELECTRIC — X — X — EX. FENCE LINE

EOP EDGE OF PAVEMENT

14-2776 PTB MEP DRAWN BY: CHECKED BY: DATE: 7.10.14

SHEET TITLE:

**OVERALL SITE** LAYOUT (OVERLAY)







LORVATH

312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

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> SITE NUMBER: HV880

> > 14-2776

POD NUMBER:

DRAWN BY: CHECKED BY:

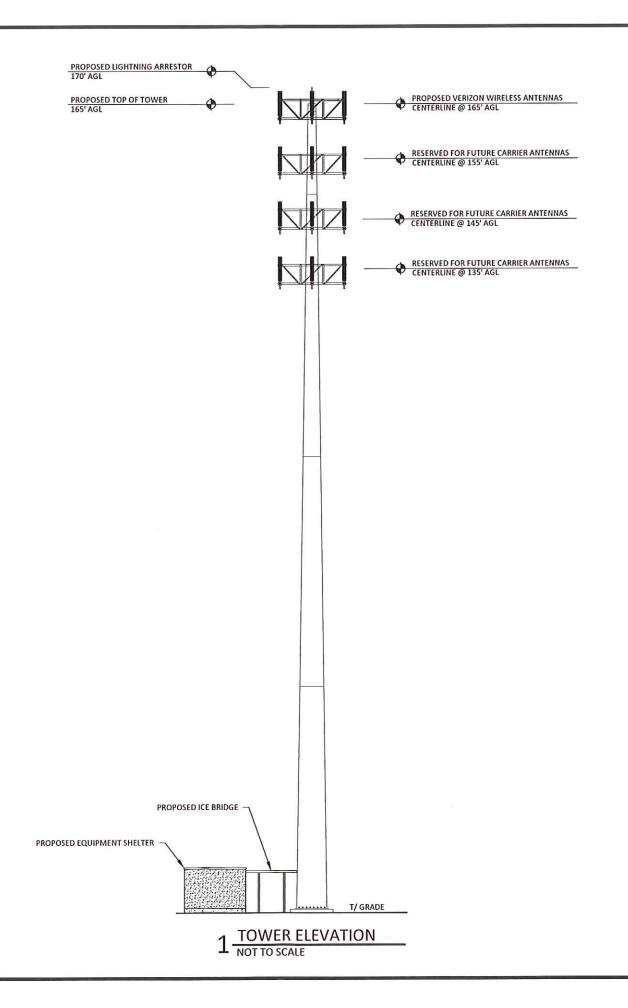
PTB MEP 7.10.14 DATE:

**ENLARGED** SITE LAYOUT

SHEET NUMBER:

#### **TOWER NOTES:**

- THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS, AND ANTENNAS TO BE DESIGNED BY OTHERS.
- 2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.





POWER OF DESIGN 4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

### CONSTRUCTION DRAWINGS

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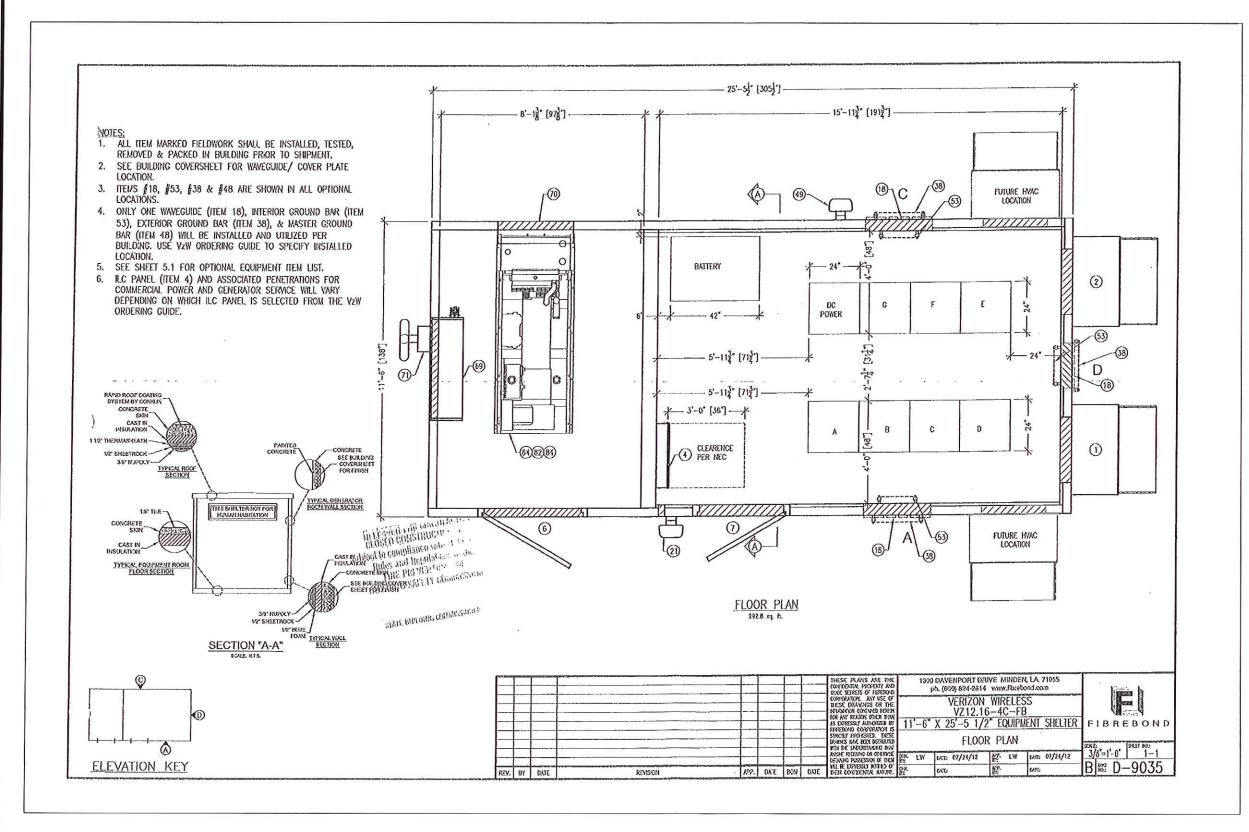
MEP 7.10.14

14-2776

SHEET TITLE:

TOWER ELEVATION

SHEET NUMBER:



SHELTER ELEVATIONS (BY OTHERS) (SHOWN FOR REFERENCE ONLY)



4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



SOUTH BEND, IN 46601 574.237.0464

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#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

HV880

POD NUMBER:

DRAWN BY:

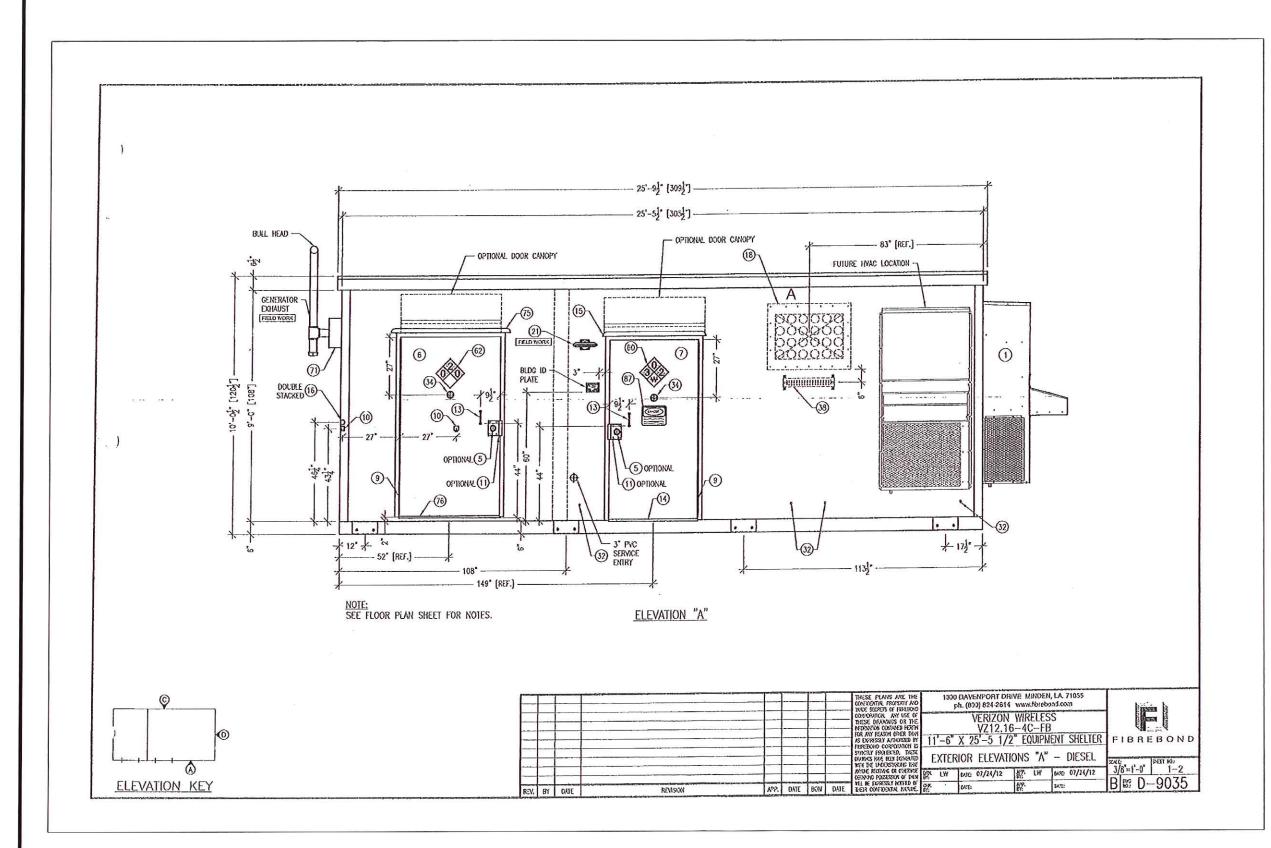
CHECKED BY: DATE:

7.10.14

14-2776

SHELTER **ELEVATIONS** 

SHEET NUMBER:



SHELTER ELEVATIONS (BY OTHERS) (SHOWN FOR REFERENCE ONLY)



4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



SOUTH BEND, IN 46601 574.237.0464

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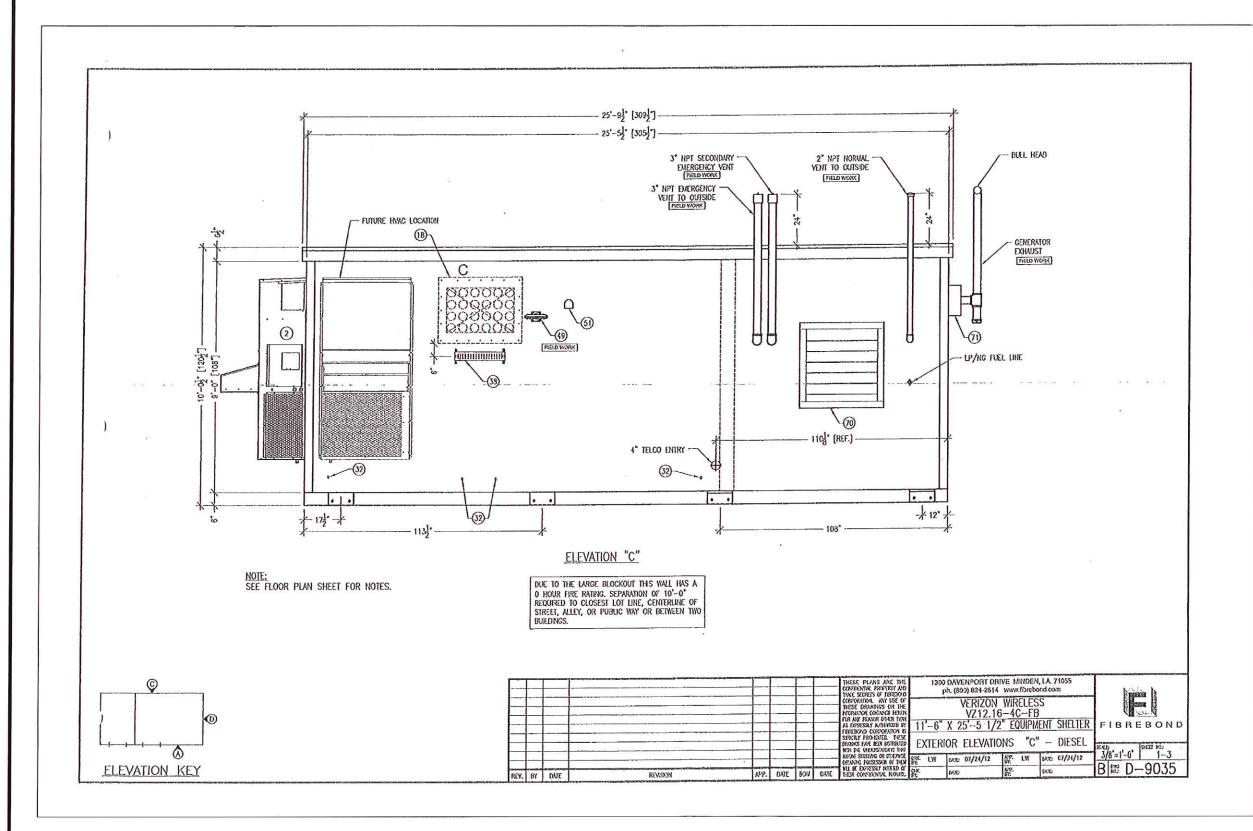
7.10.14

14-2776

SHEET TITLE:

**SHELTER ELEVATIONS** 

SHEET NUMBER:



SHELTER ELEVATIONS (BY OTHERS) (SHOWN FOR REFERENCE ONLY)





SOUTH BEND, IN 46601 574.237.0464

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SHEET TITLE:

SHELTER ELEVATIONS

SHEET NUMBER:

#### SITE WORK GENERAL NOTES

- 1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION
- 2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RE-LOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AOUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- 3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PER PROPOSED SITE OWNERS SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE SHELTER OR EQUIPMENT PAD AND
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW, OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- 7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED, OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER, AND/OR LOCAL LITTLITIES
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, AND SEEDED. SEE CONSTRUCTION NOTES FOR FURTHER INSTRUCTIONS.
- CONTRACTORS SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

#### CONCRETE AND REINFORCING STEEL NOTES:

- 1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318 AND THE SPECIFICATION 330 FOR CAST-IN-PLACE CONCRETE.
- 2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE
  FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS
  "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE OR DRAWINGS"

CONCRETE CAST AGAINST EARTH......3IN.

CONCRETE EXPOSED TO EARTH OR WEATHER:

#6 AND LARGER......2 IN. #5 AND SMALLER AND WWF....1 1/2 IN.

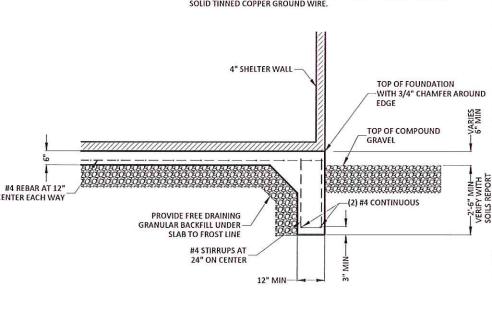
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND

SLAB AND WALL......3/4 IN. BEAMS AND COLUMNS......1 1/2 IN.

- 5. 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION
- 6. INSTALLATION OF CONCRETE EXPANSION / WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET / REDHEAD OR APPROVED EQUAL.

#### NOTES

- 30" DEPTH IS REQUIRED BETWEEN FINAL GRADE AND BOTTOM OF FOOTING, IF LOCAL FROST DEPTH IS GREATER THAN 30", A DEEPER FOOTING WILL BE REQUIRED.
- THIS FOUNDATION IS DESIGNED FOR 2000 PSF ALLOWABLE SOIL BEARING CAPACITY.
- 3. SLAB TOLERANCE IS ±3/4"
- 4. EXPANSIVE SOILS (CLAY) MAY REQUIRE SPECIAL CARE AT POINTS WHERE RIGID CONNECTIONS ARE MADE TO THE BUILDING (IE UNDERGROUND CONDUIT FEEDS, RIGID WAVEGUIDE, BRIDGES, ETC...) TO ALLOW FOR DIFFERENTIAL MOVEMENT DUE TO SETTLEMENT OR EXPANSION OF SOIL, ADEQUATE DRAINAGE WILL LESSEN THIS EFFECT.
- 5. ALL REBAR IS TO BE GRADE 60 MINIMUM.
- OVERLAP SPLICES ARE ALLOWED FOR REINFORCING BAR, USE 18" MINIMUM LAP.
- 7. ALL REQUIRED TIE DOWN PLATES, SHIMS, BOLTS, AND ANCHORS SHALL BE PLACED IN SHELTER PRIOR TO SHIPMENT FROM MANUFACTURER.
- GROUND REBAR TO SHELTER GROUND RING IN (2) LOCATIONS USING #2 SOLID TINNED COPPER GROUND WIRE.



**GRADE BEAM DETAIL** 





312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

### CONSTRUCTION DRAWINGS

Billitanias			
REV.	DATE	DESCRIPTION	
Α	7.10.14	PRELIM ISSUE	
В	8.28.14	LANDSCAPING	
С	9.30.14	CLIENT COMMENTS	
	SITE	INFORMATION:	

#### SHERIDAN

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

SITE NUMBER:

POD NUMBER: 14-2776
DRAWN BY: PTB

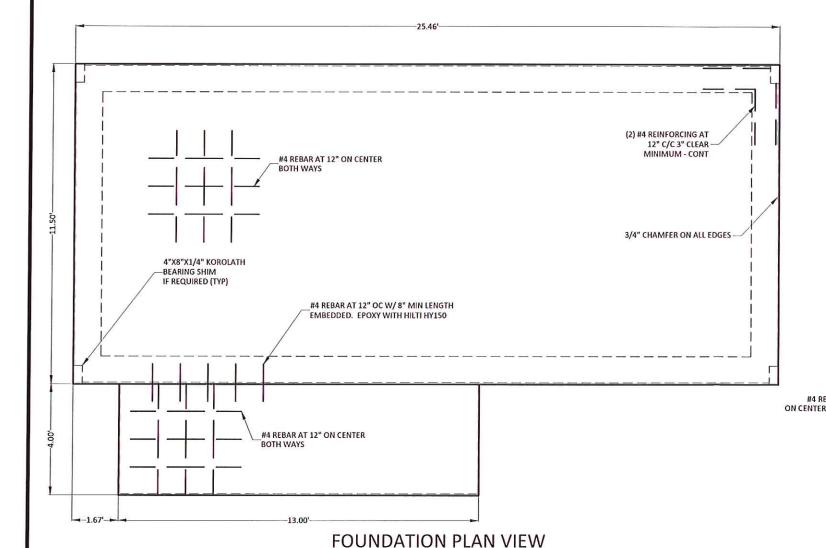
CHECKED BY: DATE:

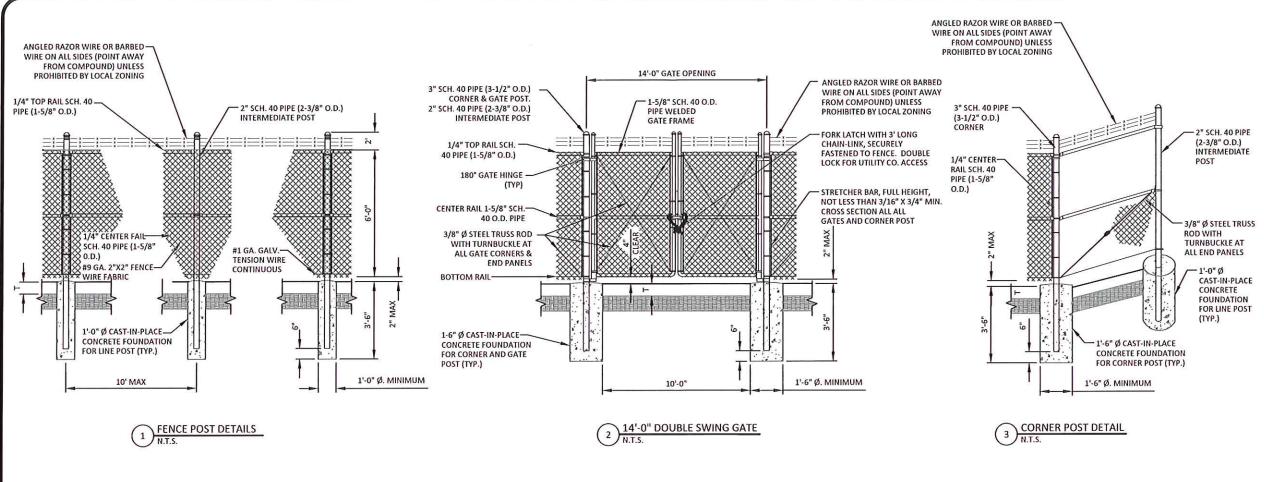
SHEET TITLE:

7.10.14

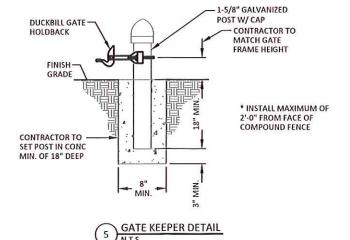
FOUNDATION
DETAILS
& NOTES

SHEET NUMBER:





PROVIDE 3' LONG CHAIN-LINK TO FENCE. DOUBLE LOCK FOR UTILITY CO. ACCESS GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL HEAVY INDUSTRIAL **DOUBLE GATE** LATCH #DAC-4000 OR APPROVED GATE LATCH DETAIL



FENCING NOTES:

- 1. ALL STEEL MATERIAL SHALL BE HOT- DIPPED GALVANIZED AND CONFORM TO FEDERAL SPECIFICATION RR-F-191.
- 2. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT LINAUTHORIZED REMOVAL
- B. THE FENCE SHALL BE GROUNDED AS SHOWN IN ELECTRICAL DETAILS
- 4. ALL FENCING AND RELATED ASSEMBLIES SHALL BE GALVANIZED ZINC FINISH (FARRIC-ASTM A392-84 FRAME WORK-ASTM F669-81)
- 5. ALL CONCRETE FOOTINGS SHALL BE 6. 1 BAG MIX 3000 PSI CONCRETE
- 6. ALL GATE FABRIC, POSTS, AND HARDWARE SHALL HAVE A GALVANIZED FINISH CONFORMING TO ASTM A153 OR 120/123

#### **GENERAL NOTES:**

1) G.C. IS RESPONSIBLE TO PAY AND SCHEDULE THIRD PARTY INSPECTIONS FOR BOTH TOWER AND BUILDING FOUNDATIONS. VERIZON WIRELESS TO RECEIVE COPIES AT CLOSE OUT.

COPIES OF THE REPORT ARE ISSUED TO THE CONTRACTOR FOR CONVENIENCE ONLY. THE REPORT IS NOT A PART OF THE CONTRACT DOCUMENTS. NEITHER THE OWNER NOR THE ENGINEER/ARCHITECT GUARANTEE THE ACCURACY OR VALIDITY OF THE DATA CONTAINED THEREIN, NOR DO THEY ASSUME ANY RESPONSIBILITY FOR THE CONTRACTOR'S USE OR INTERPRETATION OF THE DATA CONTAINED THEREIN.

PROPERTY	MINIMUM VALUE (a)	TEST METHOD
GRAB STRENGTH	180 LBS.	ASTM D-4632-91
PUNCTURE STRENGTH	75 LBS.	ASTM D-4833-88
BURST STRENGTH	290 LBS.	ASTM-D-3796
THAPEZOIDAL TEAR	50 LBS.	ASTM-D-4571-87

THE FABRIC SHOULD BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. INTERSECTIONS OF SHEETS MUST BE SEWN OR SUFFICIENTLY OVERLAPPED (AT LEAST 24 INCHES OR AS SPECIFIED BY THE MANUFACTURER). THE GEOTEXTILE SHEETS SHOULD ALSO BE PLACED TAUT TO REDUCE WRINKLES OR FOLDS CARE MUST BE EXERCISED TO PREVENT PHYSICAL DAMAGE OF THE GEOTEXTILE PRIOR TO, DURING AND AFTER INSTALLATION. UTILITIES SHOULD BE INSTALLED BEFORE PLACING THE FABRIC.



BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

#### CONSTRUCTION **DRAWINGS**

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#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069

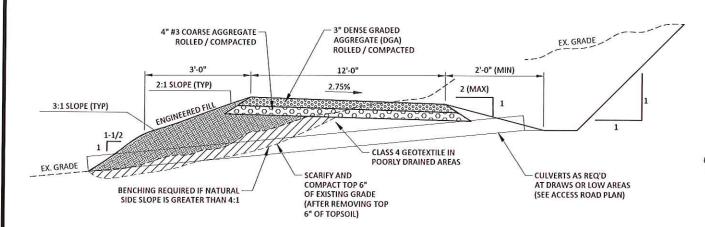
SITE NUMBER: HV880

POD NUMBER: 14-2776

DRAWN BY: PTB CHECKED BY: 7.10.14 DATE:

SHEET TITLE:

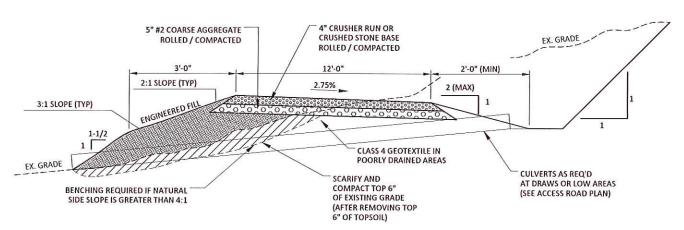
**FENCE DETAILS** & NOTES



#### TO BE USED FOR GRADES 5 - 11%

#### **GRAVEL ACCESS ROAD - GRADUAL GRADE SITUATIONS**

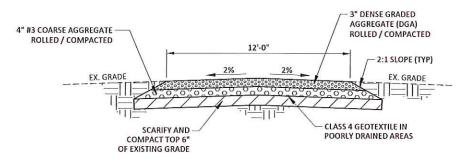
REMOVE TOP 6" OF SOIL FROM SUBGRADE NOT TO SCALE



#### TO BE USED FOR GRADES 12% AND ABOVE

#### **GRAVEL ACCESS ROAD - STEEP GRADE SITUATIONS**

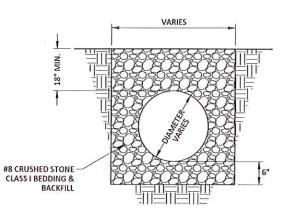
REMOVE TOP 6" OF SOIL FROM SUBGRADE NOT TO SCALE



#### TO BE USED FOR GRADES 0 - 4%

#### GRAVEL ACCESS ROAD - FLATLAND / RIDGETOP SITUATIONS

REMOVE TOP 6" OF SOIL FROM SUBGRADE NOT TO SCALE



#### **CRUSHED STONE ENCASEMENT DETAIL**

NOT TO SCALE **ENCASEMENT USED WITH** NOTE: 18" OF COVER OR LESS.

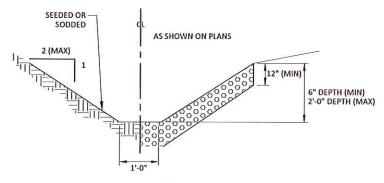
NOT TO SCALE CRADLE USED WITH MORE THAN 18" OF COVER.

**CRUSHED STONE** 

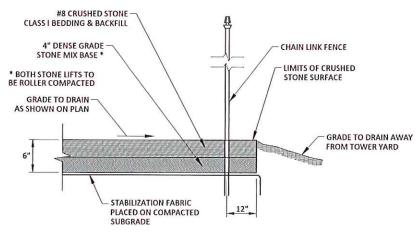
CRADLE DETAIL

VARIES

**GREATER THAN 18"** 



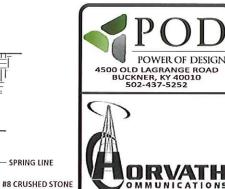
#### FLAT-BOTTOM DITCH DETAIL NOT TO SCALE



#### COMPOUND AREA SURFACING NOT TO SCALE

#### **CULVERT NOTES**

- INSTALL CULVERTS WITH THE INLETS AT OR BELOW NATURAL GRADE.
- OUTLET THE CULVERTS AT OR BEYOND THE TOE OF THE SLOPE. EROSION PROTECTION, SUCH AS RIP-RAP IS OFTEN NECESSARY AT THE OUTLET OF CULVERTS. NEVER OUTLET A CULVERT FILL MATERIAL WITHOUT PROTECTIVE MEASURES.
- 3. CULVERT SIZES TO BE DETERMINED BY VERIZON WIRELESS OR VERIZON WIRELESS REPRESENTATIVE.



CLASS I BEDDING & BACKFILL

OMMUNICATION

312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

#### **CONSTRUCTION** DRAWINGS

DRAWINGS				
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#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069

> SITE NUMBER HV880

POD NUMBER:

DRAWN BY: CHECKED BY:

SHEET TITLE:

14-2776

PTB

MEP 7.10.14

CIVIL **DETAILS** 

#### **GENERAL NOTES**

- DRAWINGS ARE NOT TO BE SCALED, THESE PLANS ARE INTENDED TO BE DIAGRAMMATIC ONLY. THE WORK INDICATED ON
  THE DRAWINGS SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO
  COMPLETE THE WORK. VERIFY ALL EQUIPMENT LOCATIONS WITH CONSTRUCTION MANGER.
- PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL CONDITIONS
  AFFECTING THE PROPOSED PROJECT, INCLUDING DEMOLITION, MECHANICAL AND ELECTRICAL INSTALLATIONS AND SHALL
  ADJUST BID ACCORDINGLY.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS ON THE JOB SITE AND CONFIRM THAT WORK AS
  INDICATED ON THE CONSTRUCTION DOCUMENTS (ALSO KNOWN AS CONSTRUCTION PLANS) CAN BE ACCOMPLISHED AS
  SHOWN BEFORE PROCEEDING.
- 4. NOTIFY PROJECT MANGER OF ANY MAJOR DISCREPANCY REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THIS CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK OR RELATED WORK IN QUESTION.
- INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- CONTRACTOR SHALL VISIT JOB SITE TO REVIEW SCOPE OF WORK AND EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, MECHANICAL SERVICE, ELECTRICAL SERVICE AND OVERALL COORDINATION.
- ALL TELEPHONE / RADIO EQUIPMENT LAYOUT, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY CONSTRUCTION MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK AND CLEARANCE REQUIRED BY OTHERS RELATED TO SAID EQUIPMENT.
- 8. ALL WORK PERFORMED AND MATERIALS SHALL MEET THE HIGHEST TRADE STANDARDS, AS A MINIMUM STANDARD, CONFORM WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
- ELECTRICAL SYSTEMS SHALL BE INSTALLED PER N.E.C. AND IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- 10. CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUB-CONTRACTORS OR WORKMEN ARE ON THE JOB SITE AND SHALL SUPERVISE AND DIRECT ALL WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- 11. CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
- 12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE (IBC) LATEST EDITION, ALONG WITH LATEST EDITION OF THE UPC, UMC, AND THE LATEST EDITION OF THE NEC. CONTRACTOR SHALL PROTECT ALL EXISTING FINISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION.
- 13. SEAL ALL PENETRATIONS THOUGH FIRE RATED AREAS WITH U.L. LISTED OR F.M. APPROVED MATERIALS. DETAILS AND SCHEMATICS PROPOSE TO SHOW END RESULT OF THE DESIGN.
- 14. MINOR MODIFICATIONS MAY DEEM TO BE NECESSARY TO SUIT JOB CONDITIONS AND DIMENSIONS, SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- 15. VERIFY ALL FINAL EQUIPMENT LOCATIONS WITH OWNER'S REPRESENTATIVE.
- 16. DIMENSIONS ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED.
- 17. CLEANUP AND SAFETY: KEEP PROJECT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE ALL EQUIPMENT NOT SPECIFIED TO REMAIN THE PROPERTY OF THE OWNER. LEAVE PREMISES IN A VACUUM AND BROOM CLEAN CONDITION; FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEMS EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY PROJECT MANAGER.
- 18. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS WILL BE DONE AFTER THE SITE HAS BEEN AWARDED THE FINAL INSPECTION. A MINIMUM OF TWO (2) COPIES OF REDLINED DRAWINGS WILL BE PROVIDED TO PROJECT MANAGER.
- 19. GENERAL CONTRACTOR IS RESPONSIBLE FOR CLEANING AND WAXING SHELTER FLOORS AFTER ALL EQUIPMENT HAS BEEN INSTALLED.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING A TRASH RECEPTACLE AND A PORTABLE TOILET AT THE SITE FOR THE DURATION OF CONSTRUCTION.
- THE PROPOSED SHELTER SHALL NOT BE USED FOR STORAGE OF TOOLS, EQUIPMENT, ETC., BY ANY CONTRACTORS OR SUB-CONTRACTORS.
- 22. THE CONTRACTOR WILL BE RESPONSIBLE FOR PICKING UP TRASH DAILY AND REMOVING ITS ACCUMULATION FROM THE CONSTRUCTION SITE. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A TRASH RECEPTACLE TO BE ON SITE FROM THE START OF CONSTRUCTION UNTIL RELEASED BY PROJECT MANAGER.
- 23. CONTRACTOR SHALL PROVIDE 90 DAY WEED CONTROL ON THE INSIDE OF COMPOUND ONLY, UTILIZING GROUND STERILANT OF CHOICE SUCH AS PRAMITAL 25E WITH SAHARA. THIS INSTRUCTION APPLIES TO ALL BUILDS (RAW LAND AND CO-LOCATION). CLOSEOUT BINDER DOCUMENTATION IS REQUIRED.

#### **CONSTRUCTION NOTES:**

- 1. CONFIRM SURVEY STAKES AND SET ELEVATIONS PRIOR TO ANY CONSTRUCTION.
- THE COMPLETE ROAD AND SITE AREA WILL BE CLEANED AND GRUBBED PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BACKFILL OR SUB-BASE MATERIAL.
- 3. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION EFFORTS GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX (6) INCHES BELOW ORIGINAL GROUND LEVEL.
- 4. UNLESS OTHERWISE INSTRUCTED BY PROJECT MANAGER TRANSPORT ALL REMOVED TREES, BRUSH, AND DEBRIS FORM THE PROPERTY TO AN AUTHORIZED LANDFILL.
- 5. CONSTRUCT TEMPORARY CONSTRUCTION ZONE ACCESS DRIVE.
- THE SITE AREA WILL BE BROUGHT TO SUB-BASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATION.
- 7. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.

SOIL STERILIZERS: TOTAL KILL PRODUCT 910 - EPA 10292-7 PHASAR CORPORATION

 AMBUSH HERBICIDE - EPA REGISTERED FRAMAR INDUSTRIAL PRODUCTS 1435 MORRIS AVENUE

P.O. BOX 5123 1435 MORRIS AVENUE UNION, NJ 07083 TEL 800 528-4924

- 8. SOIL STERILIZER SHALL BE EPA REGISTERED OF LIQUID COMPOSITION AND OF PRE EMERGENCE DESIGN AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- GRADE, SEED, FERTILIZE, AND MULCH DISTURBED AREAS IMMEDIATELY AFTER BRINGING SITE AND ACCESS ROAD TO BASE COURSE ELEVATION, WATER TO INSURE GROWTH.
- 10. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER.
- 11. AFTER COMPLETION OF CONSTRUCTION BUT PRIOR TO THE FINAL PUNCH LIST INSPECTION, APPLY THREE (3) INCHES OF 3/4 INCH CRUSHED AND WASHED STONE (OR MATCH EXISTING ON CO-LOCATED SITES) TO ALL GRAVELED AREAS.
- 12. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO THE STONE SURFACES.
- 13. SOIL STERILIZATION APPLICATION SHALL GUARANTEE VEGETATION FREE ROAD AND SITE AREA FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
- 14. DISTURBED AREA WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
- 15. ROAD AND SITE MATERIALS AND CONSTRUCTION PRACTICES SHALL CONFORM TO STATE TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
- THE CONTRACTOR SHALL REPAIR ALL AREAS DAMAGED DURING CONSTRUCTION, BACK AS CLOSE TO ORIGINAL AS
  POSSIBLE.
- 17. IF UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED THEY SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND WHERE POSSIBLE STABILIZED WITH MIRAFI-600X FABRIC OR EQUIVALENT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
- 18. ELEVATIONS FOR SITE AND ACCESS ROAD ARE TO BE CALCULATED FROM FINISHED GRADES OR SLOPES INDICATED.
- THE ACCESS ROAD SHALL BE BROUGHT TO BASE COURSE ELEVATION PRIOR TO FOUNDATION CONSTRUCTION TO PERMIT USE, COMPACTION, AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
- 20. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
- 21. THE CONTRACT SHALL BE ASSUMED TO INCLUDE GRADING, BANKING, DITCHING AND UNLESS OTHERWISE INDICATED, COVERING TWO INCHES OF SURFACE COURSE. ALL ROADS OR ROUTES UTILIZED FOR ACCESS TO THE SITE COMMENCING AT THE POINT OF INTERSECTION WITH THE NEAREST PUBLIC THOROUGHFARE.
- 22. WHEN IMPROVING AN EXISTING ACCESS ROAD, GRADE THE EXISTING ROAD TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
- 23. PLACE FILL OR STONE IN SIX INCH MAXIMUM LIFT AND COMPACT BEFORE PLACING NEXT LIFT.
- 24. THE FINISH GRADE, INCLUDING TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT BEYOND THE SITE FENCE AND SHALL COVER THE AREA AS INDICATED.
- 25. RIPRAP SHALL BE APPLIED TO THE SIDES OF DITCHES OR DRAINAGE SWALES.
- 26. RIPRAP ENTIRE DITCH FOR SIX FEET IN ALL DIRECTIONS AT CULVERT OPENINGS
- SEED FERTILIZER AND STRAW COVER SHALL BE APPLIED TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES NOT OTHERWISE RIPRAPPED.



POWER OF DESIGN 4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

### CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION		
Α	7.10.14	PRELIM ISSUE		
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С	9.30.14	CLIENT COMMENTS		

SITE INFORMATION:

#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

HV880

POD NUMBER:

DRAWN BY: CHECKED BY: DATE:

THE TITLE:

14-2776

**NOTES** 

SHEET NUMBER:

#### **CODED DRAWING NOTES**

- (1) PROPOSED MONOPOLE
- PROPOSED SHELTER GROUND RING 2' FROM FOUNDATION
- PROPOSED TOWER GROUND RING 2' FROM FOUNDATION
- INSPECTION SLEEVE WITH TEST LOOP (MIN 2)
- (5) CADWELD (TYP)
- GROUND ROD WITH CADWELD TO BE SPACED EVENLY BETWEEN 10' AND 20' SEPERATION (TOTAL 8)
- GROUND EACH PROPOSED ICE BRIDGE POST TO NEAREST GROUND RING
- BOND PROPOSED SHELTER GROUND RING TO TOWER GROUND RING (TYP 2 PLACES)
- PROPOSED ICE BRIDGE POST TO BE FIELD LOCATED
- BOND PROPOSED SHELTER GROUND RING TO NEAREST FENCE POST (TYP 2 PLACES)
- (11) PROPOSED ICE BRIDGE
- GROUND PROPOSED H-FRAME TO NEAREST FENCE POST

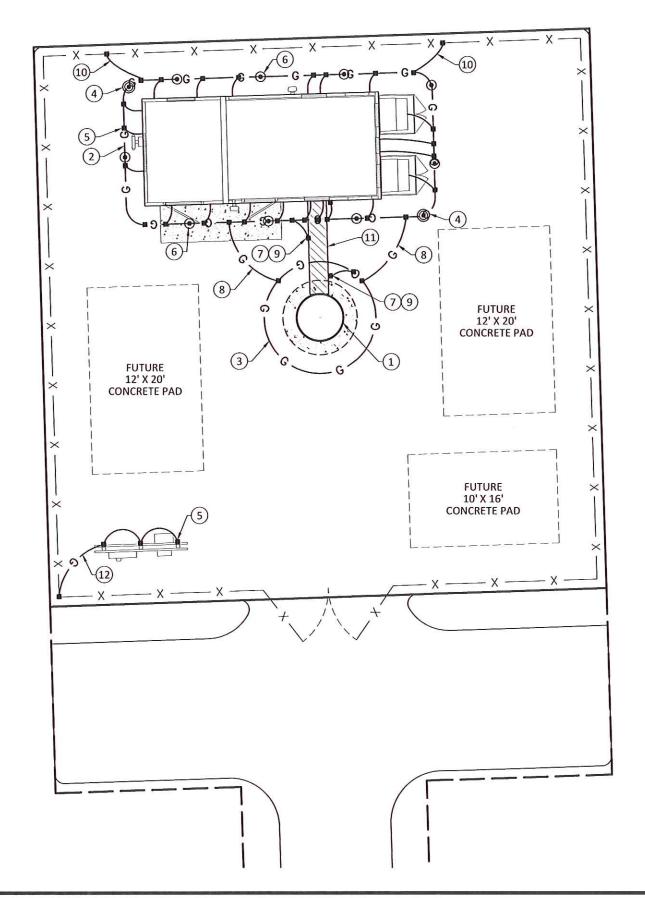
#### LEGEND

CONDUCTOR. (30" BELOW GRADE)

PROPOSED INSPECTION SLEEVE 0

**CADWELD** 

PROPOSED CHAIN LINK FENCE





NOTE: ACTUAL RESISTANCE SHOULD BE MEASURED PRIOR TO

CONNECTION TO THE POWER GRID. THE PROPOSED

SPECIFIED, GROUND WELLS (TYP 2-4) SHOULD BE NO

NOTE: SEE SHEET E-4 FOR GROUND DETAILS.

FURTHER THAN 45' APART.

SHELTER GROUND RING AND RODS / WELLS SHOULD BE

LOCATED OUTSIDE THE SHELTER FOUNDATION. GROUND

RODS SHOULD BE BETWEEN 10' & 20' APART, AND WHEN

4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



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> SITE NUMBER: HV880

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**GROUNDING** PLAN

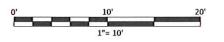
SHEET NUMBER:

E-1

#2 SOLID TINNED COPPER GROUND

WITH TEST LOOP

GROUND ROD WITH CADWELD



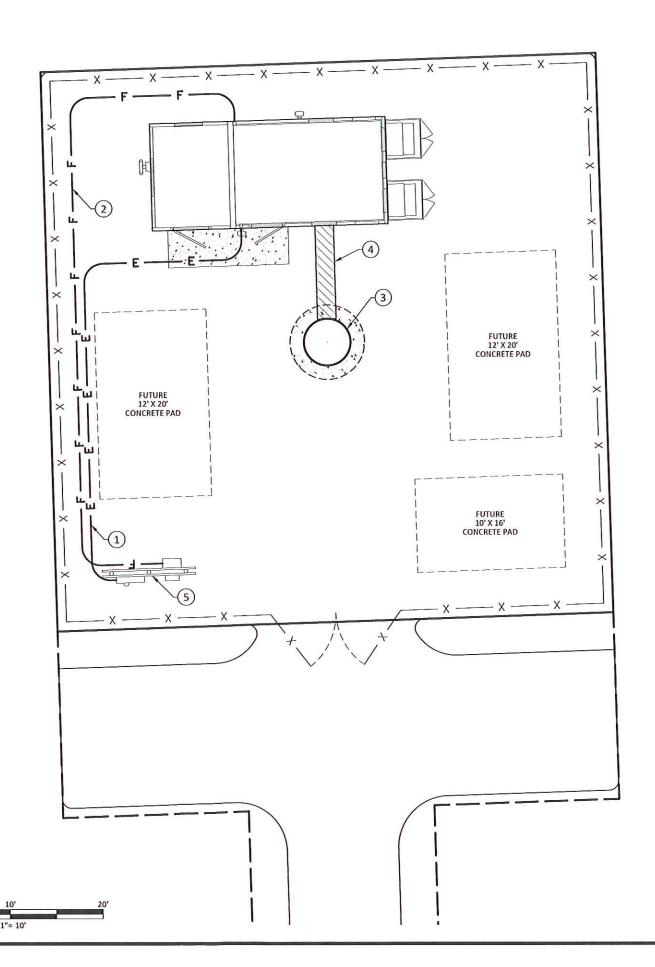


#### **CODED DRAWING NOTES**

- (1) 4" & (1) 1-1/4" PVC ELECTRIC CONDUIT EACH W/ DETECTABLE PULL TAPE TO EQUIPMENT SHELTER (53'±)
- (1) 4" PVC FIBER CONDUIT W/ DETECTABLE PULL TAPE TO EQUIPMENT SHELTER (77'±)
- (3) PROPOSED MONOPOLE
- (4) PROPOSED ICE BRIDGE
- 5 PROPOSED 8' UTILITY H-FRAME

NOTE: CONTRACTOR TO HAND EXCAVATE UTILITY TRENCH IN AREAS WHERE EXISTING UTILITIES ARE PRESENT.





POWER OF DESIGN 4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



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SHEET TITLE:

UTILITY **PLAN** 

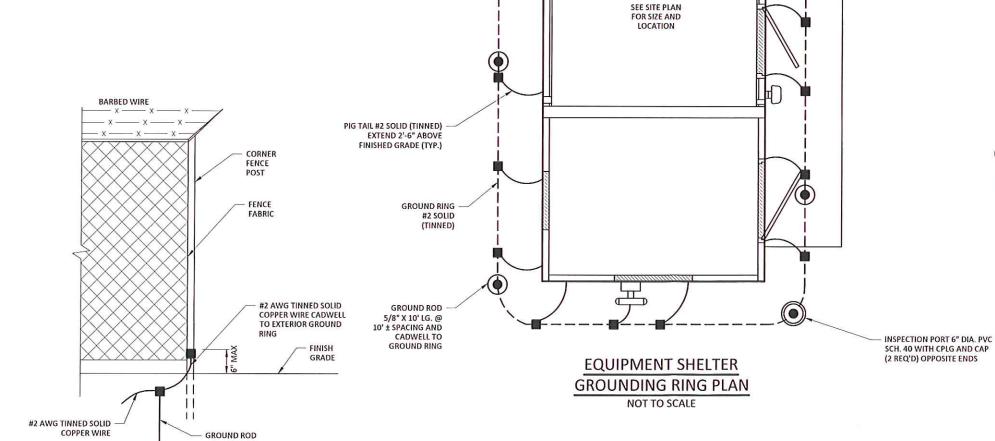


- EACH BUILDING / EQUIPMENT PAD GROUNDING LAYOUT IS TO COMPLY WITH PROPOSED SHELTER OWNER AND SITE OWNERS SPECIFICATIONS.
- 2. ALL GROUNDING DETAILS TO FLOW CLOCKWISE. (AS SHOWN)
- 3. CONTACT CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS PERSONNEL PRIOR TO BACKFILLING GROUNDING INSTALLATION.
- 4. PLACE TEST PORTS AT OPPOSITE ENDS OF SHELTER.
- MINIMUM 3 FOOT SPACING BETWEEN THE GROUND CONNECTIONS TO THE MAIN TOWER GROUND RING.
- 6. GROUND REBAR TO SHELTER GROUND RING IN (2) LOCATIONS USING #2 SOLID TINNED COPPER GROUND WIRE.

5/8" X 10' LG

FENCE GROUNDING DETAIL

NOT TO SCALE



CADWELD (TYP.)

SPLICE (AS REQUIRED) -

**EQUIPMENT SHELTER** 

LEGEND

INSPEC

INSPECTION POINT

GROUND ROD - 5/8" X 10' WITH CADWELL GROUND CONNECTION

PRIMARY BOND

CADWELL CONNECTION



POWER OF DESIGN 4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

### CONSTRUCTION DRAWINGS

REV.	DATE	DESCRIPTION
Α	7.10.14	PRELIM ISSUE
В	8.28.14	LANDSCAPING
С	9.30.14	CLIENT COMMENTS

SITE INFORMATION:

#### **SHERIDAN**

20481 HORTON ROAD SHERIDAN, IN 46069 COUNTY: HAMILTON

SITE NUMBER: HV880

14-2776

7.10.14

POD NUMBER:

DRAWN BY:

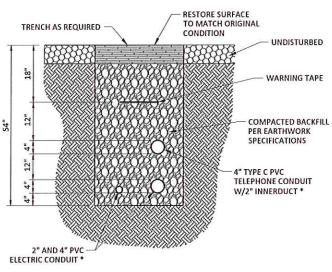
CHECKED BY: DATE:

SHEET TITLE:

SHELTER GROUNDING PLAN

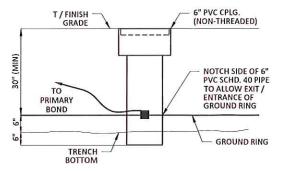
SHEET NUMBER:

E-3

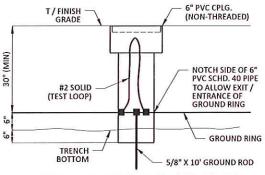


### 3-CONDUIT BURIED CABLE DETAIL NOT TO SCALE

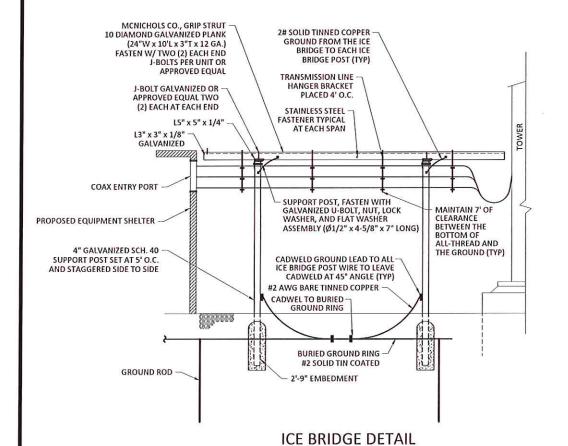
SEPERATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENT. SEE CONDUIT(S) SIZE APPLICABLE IN THE POWER AND TELCO RISER DIAGRAM. NUMBER AND SIZES OF POWER AND TELCO CONDUITS MUST MEET ALL NEC AND UTILITY COMPANY REQUIREMENTS.



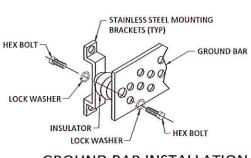
## PRIMARY BOND W/ INSPECTION SLEEVE DETAIL NOT TO SCALE



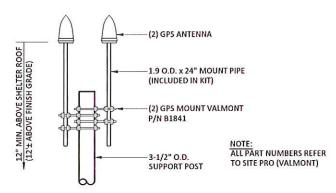
INSPECTION SLEEVE WITH TEST
LOOP DETAIL - 2 REQUIRED
NOT TO SCALE



NOT TO SCALE

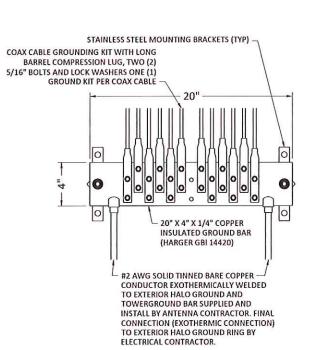


GROUND BAR INSTALLATION
NOT TO SCALE



NOTE: CONTRACTOR TO SUPPLY AND INSTALL GPS, GPS MOUNT, CABLE, CONNECTORS, ETC

### GPS MOUNT DETAIL NOT TO SCALE



### TOWER GROUND BAR (TGB)

NOT TO SCALE





SOUTH BEND, IN 46601 574.237.0464

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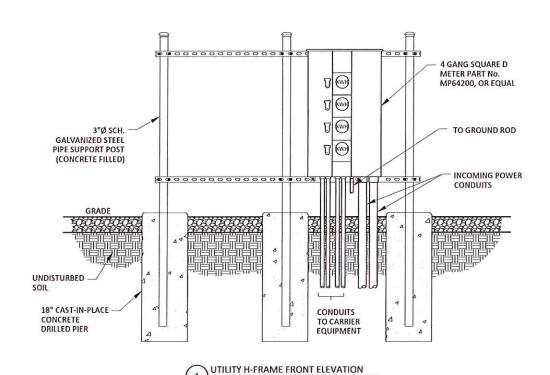
DRAWN BY: PTB
CHECKED BY: MEP
DATE: 7.10.14

SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

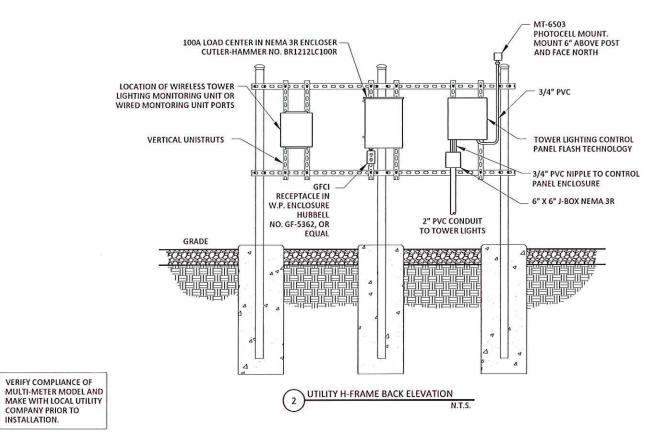
F-4

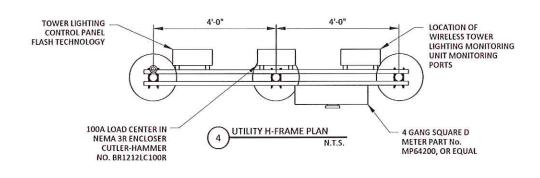


3"Ø SCH. GALVANIZED STEEL PIPE SUPPORT POST (CONCRETE FILLED) 100A LOAD CENTER IN NEMA 3R ENCLOSER CUTLER-HAMMER NO. BR1212LC100R 4 GANG SQUARE D TOWER LIGHTING CONTROL METER PART No. PANEL FLASH TECHNOLOGY MED. INTENSITY DUAL STROBE MP64200, OR EQUAL LIGHTING FTB 312-3E LOCATION OF WIRELESS TOWER LIGHTING MONITORING UNIT OR WIRED MONTORING UNIT PORTS PROPOSED UNISTRUT MODEL 3300 (SPAN NOT TO EXCEED 4' O.C.) 18" CAST-IN-PLACE

DRILLED PIER

UTILITY H-FRAME SIDE ELEVATION





INSTALLATION.

48 HOURS PRIOR TO DIGGING, CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES TO **LOCATE ALL UNDERGROUND UTILITIES** 



4500 OLD LAGRANGE ROAD BUCKNER, KY 40010 502-437-5252



312 WEST COLFAX AVE SOUTH BEND, IN 46601 574.237.0464

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> SITE NUMBER: HV880

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MEP 7.10.14

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DRAWN BY: CHECKED BY: DATE:

SHEET TITLE:

H-FRAME **DETAILS** 

SHEET NUMBER:

E-5

#### **ELECTRICAL NOTES**

- 1. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE.
- 2. THE NEUTRAL IS TO BE GROUNDED AT THE METER MAIN ONLY.
- THE TEMPERATURE RATING ASSOCIATED WITH THE AMPACITY OF A CONDUCTOR SHALL BE SO SELECTED AND COORDINATED AS TO NOT EXCEED THE LOWEST TEMPERATURE RATING OF ANY CONNECTED TERMINATION, CONDUCTOR, OR DEVICE; REFER TO TABLE 'A", AND THE N.E.C. ARTICLE 310.
- ALL ENCLOSURES CONTAINING THE SERVICE CONDUCTORS, SERVICE RACEWAY, CABLE ARMOR, BOXES, FITTINGS, AND CABINETS MUST BE EFFECTIVELY BONDED TOGETHER.
- 5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY LABELED WITH ENGRAVED PLASTIC LABELS FOR EACH PANELBOARD, PULL BOX, J-BOX, SWITCH BOX, ETC. IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

TERMINATION RATING		CONDUCTOR INSULATION RATING		
	60 DEGREES C	75 DEGREES C	90 DEGREES C	
60 DEGREES C	ок	OK AT 60 DEGREES C AMPACITY	OK AT 60 DEGREES C AMPACITY	
75 DEGREES C	NO	ОК	OK AT 75 DEGREES C AMPACITY	
60/75 DEGREES C	ОК	OK 60 OR 75 DEGREES C AMPACITY	OK 60 OR 75 DEGREES C AMPACITY	
90 DEGREES C	NO	NO	OK ONLY IF EQUIPMENT HAS 90° C RATING	

#### MATERIALS, ELECTRICAL WIRING AND RACEWAYS

- ALL CIRCUIT BREAKERS, FUSES, CONDUCTORS AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT TO WHICH THEY MAY BE SUBJECTED AND A MINIMUM OF 10,000 AIC RATING UNLESS SPECIFIED OTHERWISE, OR AS PER LOCAL CODES.
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS WEATHERPROOF RECEPTACLES SHALL HAVE "WPD" 8-INCH LIFT COVER PLATES.
- METER SOCKET AMPERAGE, VOLTAGE AND NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS AND MANUFACTURED BY SQUARE "D" COMPANY OR APPROVED EQUAL.
- INSTALLATION OF RIGID METAL CONDUIT (RMC) SHALL COMPLY WITH APPLICABLE PROVISION OF NATIONAL ELECTRICAL CODE (N.E.C.) ARTICLES 300 & 346 AND SHALL BE "UL" APPROVED.
- INSTALLATION OF ELECTRICAL METALLIC TUBING (EMT) SHALL COMPLY WITH APPLICABLE PROVISION OF N.E.C. ARTICLES 300 & 348 AND SHALL BE "UL" APPROVED.
- INSTALLATION OF INTERMEDIATE METAL CONDUIT (IMC) SHALL COMPLY WITH APPLICABLE PROVISION OF N.E.C. ARTICLES 300 & 348 AND SHALL BE "UL" APPROVED.
- 7. PVC CONDUIT SHALL BE SCHEDULE 40 HIGH IMPACT POLYVINYL CHLORIDE AND SHALL BE USED WITH UNTHREADED SOLVENT CEMENT PVC CONDUIT FITTINGS. COUPLINGS SHALL HAVE A CENTER STOP TO TYPE ENSURE PROPER SEATING. CONDUIT SHALL BE MANUFACTURER BY CARLON OR ACCEPTABLE EQUAL SHALL BE IN COMPLIANCE WITH N.E.C. ARTICLE 300 & 347 AND SHALL BE "UL" APPROVED.
  - 1. ALL PVC BELOW GRADE SHALL BE SCHEDULE 40 HIGH IMPACT POLYVINYL CHLORIDE 2. ALL PVC ABOVE GRADE SHALL BE SCHEDULE 80 HIGH IMPACT POLYVINYL CHLORIDE
- ALL WIRING MUST BE INSTALLED IN CONDUIT UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER, NEC, AND LOCAL CODES.
- ALL WIRING SHALL BE COPPER TYPE AND IN ACCORDANCE WITH THE N.E.C. OR AS INDICATED ON DRAWINGS.
- 10. ALL ELECTRICAL EQUIPMENT SHALL BE NEW, SQUARE D (or APPROVED EQUAL) RATED NEMA 3R AND POWDER COAT PAINTED, WITH THE SIZE AS SPECIFIED AND IN ACCORDANCE WITH THE N.E.C. UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL RACEWAYS SHALL BE NEW, SQUARE D (or APPROVED EQUAL) RATED NEMA 3R, AND POWDER COAT OR ELECTRO-MAG PAINTED.
- 11. JUNCTION BOXES OR PULL BOXES SHALL MEET NATIONAL ELECTRICAL CODE STANDARDS AND AS APPROVED FOR INSTALLATION OF RACEWAYS AND WIRING.
- THE RACEWAY AND WIRING INSTALLATION SHALL BE GROUNDED PERMANENTLY AND EFFECTIVELY IN ACCORDANCE WITH N.E.C. ARTICLE 250.
- THE CONTRACTOR SHALL BE AWARE THAT ALL STATE AND LOCAL CODES SHALL APPLY TO THIS INSTALLATION AND MUST BE ADHERED TO.
- 14. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE SQUARE "D" (OR APPROVED EQUAL) GRAY POWDER COAT PAINTED NEMA 3R AND SHALL BE COATED LIGHTLY WITH A CLEAR COAT LACQUER SPRAY; EXCEPT STAINLESS STEEL EQUIPMENT.
- AREAS OF APPLICATION FOR PULL BOX(FCA243624FF4xx) WOULD IN LOCATION SUCH AS DRIVE WAYS, PARKING LOTS, AND INSIDE OF OR OUTSIDE OF COMPOUND.

#### SCOPE OF WORK

- THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WIRING AND EQUIPMENT UNLESS OTHERWISE INDICATED. MAIN COMPONENTS ARE AS FOLLOWS:
- ONE SET OF COMPLETED ELECTRICAL "AS INSTALLED" OR "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE JOB SHOWING ACTUAL DIMENSIONS, ROUTING AND CIRCUITS SHALL BE PROVIDED TO THE PROJECT COORDINATOR. ALL BROCHURES, OPERATING MANUALS, CATALOGS SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE PROJECT COORDINATOR AT JOB COMPLETION.
- PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF ELECTRICAL WORK
- UPON COMPLETION OF WORK, CONDUIT CONTINUITY, SHORT CIRCUIT, AND GROUNDING FALL POTENTIAL TEST WILL BE MADE FOR APPROVAL AND SUBMIT TEST REPORTS TO THE PROJECT COORDINATOR.
- CONTRACTOR SHALL CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE IN A COMPLETE AND UNDAMAGED CONDITIONS.
- 6. THE COMPLETED JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF SITE ACCEPTANCE BY THE PROJECT COORDINATOR. ANY WORK MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AND AT THE EXPENSE OF THE CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ELECTRICAL EQUIPMENT PROVIDED BY ELECTRICAL SUPPLIERS.
- 8. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATING SYSTEM ENERGIZED THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- 9. CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE, THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR
- CONTRACTOR SHALL OBTAIN ALL NECESSARY BUILDING AND / OR ELECTRIC PERMITS INSPECTIONS AND APPROVALS, AND PAY ALL REQUIRED FEES PURSIANT TO THE WORK
- 11. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE (N.E.C.) AND ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES. ALL COMPONENTS SHALL BE "UL" APPROVED.
- 12. CONTRACTOR SHALL BEFORE SUBMITTING THEIR BID, VISIT THE PROJECT SITE AND BECOME FAMILIAR WITH THE CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM
- 13. EXACT LOCATION OF ALL EQUIPMENT SHALL BE COORDINATED WITH THE CCUSA AND OTHER TRADES.
- 14. CONTRACTOR SHALL PROVIDE ALL VERIFICATION OBSERVATION TESTS AND EXAMINE ALL WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT COORDINATOR LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- 15. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN SAFE CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT (SEE NOTE 14 FOR EXCEPTIONS), MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- 16. ALL ELECTRICAL EQUIPMENT IS SPECIFIED AS SQUARE "D" BRAND, SUBSTITUTION SHALL ONLY BE MADE WITH THE APPROVAL OF CCUSA. THE CONTRACTOR SHALL SUBMIT DETAILS OF PROPOSED MATERIALS, REASON FOR CHANGE AND CHANGE IN CONTRACT AMOUNT.

#### **GROUNDING BAR NOTES:**

- THE SIZE OF THE GROUND BARS INSTALLED ON TOWERS SHALL BE 1/4"
  THICK, 4" WIDE, LENGTH AS REQUIRED. TOP OF TOWER BARS MAY BE
  SMALLER, BUT MUST PROVIDE FOR FULL POTENTIAL OF FUTURE
  CONNECTIONS.
- THE LOWEST POINT OF THE GROUND BAR AT THE BOTTOM OF THE VERTICAL RUN SHOULD BE APPROXIMATELY ONE TO TWO FEET ABOVE THE WAVEGUIDE BRIDGE ICE SHIELD. TWO FEET IS THE MAXIMUM HEIGHT. THIS GROUND BAR SHOULD EXTEND APPROXIMATELY 6" BEYOND THE TOWER LEG TO FACILITATE WIRE ROLITING.
- A MIDDLE OR INTERMEDIATE GROUND BAR WILL BE REQUIRED ON TRANSMISSION LINES GREATER THAN 200 FEET IN OVERALL LENGTH OR WHEN MICROWAVE IS PRESENT.
- ALL TOWER TOP GROUND BARS SHALL BE BOLTED TO THE WAVEGUIDE LADDER OR TOWER LEGS, DEPENDING ON LOCATION WITH APPROVED GROUNDING CLAMPS. NO ANGLE ADAPTERS OR ROUND MEMBER CLAMPS ALLOWED.
- 5. THE BOTTOM GROUND BAR SHALL BE BONDED WITH TWO NO. 2 SOLID, TINNED, COPPER WIRE TO THE TOWER GROUND RING USING THE EXOTHERMAL WELD PROCESS. THE LEAD MUST RUN AS DIRECT AND STRAIGHT AS POSSIBLE IN 3/4" NON-METALLIC FLEX. SHOULD EXCESSIVE FOUNDATION HEIGHT REQUIRE GROUND BAR INSTALLATION ABOVE 10-12 FEET, THIS CONNECTION MAY BE MADE DIRECTLY TO THE TOWER. THE FIELD MANAGER MUST APPROVE THE ALTERNATIVE.
- THE MAIN REFERENCE GROUND BAR (MRGB) SHALL BE BONDED 6" IN FROM END WITH NO. 2 SOLID, TINNED COPPER WIRE TO THE GROUND RING SYSTEM USING MECHANICAL CRIMP LUGS.
- THIS GROUND BAR / WELLS SHALL BE MOUNTED AND SUPPORTED FROM THE WAVEGUIDE ICE BRIDGE APPROXIMATELY 3 FEET FROM EQUIPMENT OR SHELTER AND BELOW THE LOWEST SET OF TRANSMISSION LINES.
- ALL EXTERIOR TRANSMISSION LINE GROUNDS HAVE INSULATED NO. 6 STRANDED COPPER CONDUCTORS WITH TWO HOLE COMPRESSION LUGS. GROUND CONDUCTORS MUST ALWAYS FALL DOWNWARD TO THE GROUND BAR CONNECTION.
- 9. THE GROUND BARS MUST BE CLEANED TO REMOVE ANY OXIDATION, PAINT OR OTHER FOREIGN SUBSTANCES. THE POINTS OF CONNECTION MUST BE COATED WITH A CONDUCTIVE, ANTI-OXIDANTION MATERIAL AFTER THE CONNECTIONS ARE MADE, THE GROUND BARS AND THEIR TERMINATIONS SHALL BE COATED WITH AN ANTIOXIDANT MATERIAL WIPE CLEAN ALL EXCESS. UNLESS GROUND WELLS SPECIFIED IN DESIGN THEN SEE EQUIPMENT GROUNDING PLAN.
- TRANSMISSION LINE GROUNDS SHALL HAVE 2 INCHES OF SLACK. THEY ARE NOT TO BE INSTALLED TIGHT TO ACCOMMODATE FOR MOVEMENT. ALL GROUND WIRE SHALL HAVE A MINIMUM BENDING RADIUS OF 12".
- ALL CONNECTIONS TO GROUND BARS / WELLS OR EQUIPMENT WITH TWO-HOLE COMPRESSION LUGS. GROUNDING CONNECTORS SHALL BE COPPER. NUTS, BOLTS, AND WASHER SHALL BE STAINLESS STEEL.

#### **GROUNDING NOTES:**

- APPLY ANTIOXIDANT COMPOUND TO ALL GROUND BARS AND GROUND CONNECTIONS. WIPE CLEAN ALL EXCESS.
- MAKE ALL CONNECTIONS TO GROUND BAR OR METAL EQUIPMENT ENCLOSURES WITH TWO-HOLE COMPRESSION LUGS. (SEE DETAIL)
- 3. GROUNDING CONNECTORS SHALL BE COPPER. NUTS, BOLTS, AND WASHERS SHALL BE STAINLESS STEEL.
- 4. ALL GROUND WIRE SHALL HAVE A MINIMUM BENDING RADIUS OF 12".





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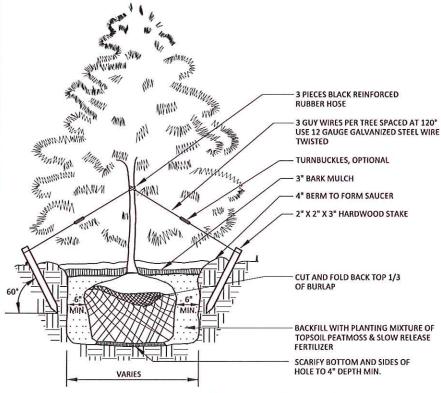
ELECTRICAL & GROUNDING NOTES

SHEET NUMBER:

E-6

#### **GENERAL NOTES**

- 1. ALL PLANTS MUST BE HEALTHY, FREE OF PESTS AND DISEASES.
- 2. STANDARDS SET FORTH IN 'AMERICAN STANDARDS FOR NURSERY STOCK' REPRESENT GUIDELINE SPECIFICATIONS ONLY AND CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR ALL PLANT
- 3. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF FINAL ACCEPTANCE BY THE OWNER. THE LANDSCAPE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD (AS PER DIRECTION OF THE OWNER).
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) AREAS AND LAWNS UNTIL THE WORK AREAS ARE ACCEPTED IN TOTAL.
- 5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCUR AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
- ALL DISTURBED AREAS AND ISLANDS SHALL BE SEEDED OR SODDED PER DIRECTION OF THE OWNER.
- IF WORK IS REQUIRED WITHIN THE EASEMENTS CAUSING REMOVAL OR DAMAGE OF LANDSCAPE MATERIALS, THE OWNER SHALL BE RESPONSIBLE FOR REPLACEMENT OF MATERIALS.
- 8. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR BY THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST, WHILE OTHER DEFECTIVE PLANT MATERIAL SHALL BE REPLACED OR REPAIRED WITHIN THREE MONTHS.
- 9. ALL PLANTING BEDS SHALL BE COVERED IN A 3" THICK LAYER OF RIVER STONE.



#### TYPICAL CONIFEROUS TREE PLANTING DETAIL

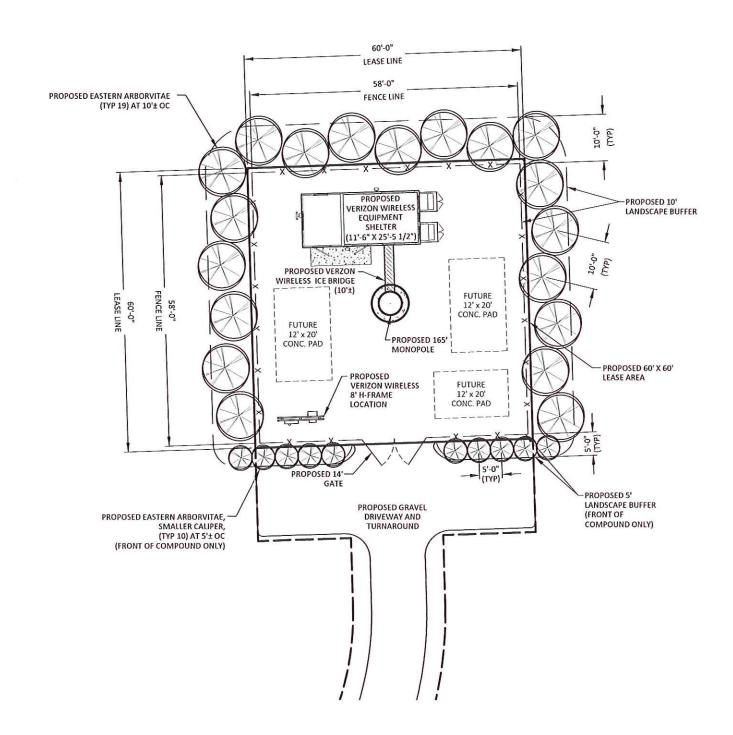
KEV

INLI	
B&B	- Balled and Burlapped
cal.	- Caliper
cont.	- Container
ht.	- Height
o.c.	- On Center
No.	- Number
NO.	- Number

	P	LANT MATERIAL	S LIST		
QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	NOTES
29	Thuja occidentalis	EASTERN ARBORVITAE	Min. 2" cal.	B&B	6' Height, 10' o.c.

QUANTITIES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR THE FINAL COUNT. IF THERE ARE ANY DISCREPANCIES IN THE QUANTITIES, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT.









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LANDSCAPE **PLAN**